

WHAT IS CLAIMED IS:

1. A nickel metal hydride storage battery, comprising:
a battery case; and
5 a group of electrode plates arranged in the battery case,
wherein the battery case comprises a battery case main body having a
hole and a lid for closing the hole;
the battery case comprises a first portion made of a metal or a laminate
of a metal and a resin, and a second portion made of a resin; and
10 an area of the first portion is 20% or more and 90% or less with respect
to the entire battery case.
2. The nickel metal hydride storage battery according to claim 1, wherein
the battery case main body comprises a resin case and a multilayered film
15 formed on a part of the surface of the resin case; the multilayered film
comprises a metal layer and two resin layers arranged in a manner in which
the metal layer is interposed between the two resin layers; and a portion on
which the multilayered film is formed is the first part.
- 20 3. The nickel metal hydride storage battery according to claim 1, wherein
the average thickness of the second portion is 0.7 mm or more and 2.5 mm
or less.
4. The nickel metal hydride storage battery according to claim 1, wherein
25 the hydrogen permeability coefficient at 40°C of the resin forming the
second portion is 2×10^{-15} mol·m/m²·sec·Pa or more and 1×10^{-14}
mol·m/m²·sec·Pa or less.
5. The nickel metal hydride storage battery according to claim 1, wherein
30 the average value of the hydrogen permeability at 40°C of the second
portion is 1.4×10^{-18} mol/m²·sec·Pa or more and 2.5×10^{-17} mol/m²·sec·Pa or
less.
6. The nickel metal hydride storage battery according to claim 1, wherein
35 the group of electrode plates comprise a negative electrode comprising a
hydrogen absorbing alloy as a main component; and the hydrogen absorbing
has an equilibrium hydrogen desorption pressure at 45°C of 0.02 MPa or

more and 0.1 MPa or less.

7. The nickel metal hydride storage battery according to claim 1, wherein the second portion comprises a polymer alloy of polypropylene and polyphenylene ether.

8. The nickel metal hydride storage battery according to claim 1, wherein the area of the first portion is 40% or more and 80% or less with respect to the area of the entire battery case.

9. The nickel metal hydride storage battery according to claim 8, wherein the area of the first portion is 50% or more and 70% or less with respect to the area of the entire battery case.

10. The nickel metal hydride storage battery according to claim 1, wherein the entire battery case main body is the first portion and the lid is the second portion.

11. The nickel metal hydride storage battery according to claim 1, wherein the battery case main body is formed of a Ni-plated steel sheet.

12. The nickel metal hydride storage battery according to claim 1, wherein the capacity of the nickel metal hydride storage battery is in the range from 4 Ah to 10 Ah.

13. The nickel metal hydride storage battery according to claim 1, wherein the area per cell of the nickel metal hydride storage battery is in the range from 100 cm² to 300 cm².